

REMARKS

The Office action of July 21, 2008, has been carefully considered.

Claim 14 has now been amended to recite that the sonotrode has a head portion comprising at least one working surface for welding metal, this recitation found in Claim 1 as originally filed. In addition, the recitations of Claim 16 have now been incorporated into Claim 14, the claim now reciting that the reinforcement exhibits triangular geometry in a section of the longitudinal axis. Moreover, Claim 14 also recites that is the front surface which comprises the at least one reinforcement. Claim 16 has been canceled.

A new Claim 27 has been added to the application, reciting that the reinforcement has a unitary structure with the sonotrode head, as is apparent from the figures of the present application.

Claims 14-15 and 18-22 have been rejected under 35 USC 102(b) as anticipated by Tamamoto, while Claims 23-26 have been rejected under 35 USC 103(a) over Tamamoto in view of Ehlert et al.

As Claim 16 was not rejected over Tamamoto, Applicants submit that the rejections over Tamamoto have been rendered moot by the combination of claims 14 and 16, and withdrawal of these rejections is requested.

Claims 14-26 have been rejected under 35 USC 102(b) as anticipated by Neuwirth et al.

The Neuwirth et al reference is directed to an ultrasonic rotary horn, intended for welding or separating *thermoplastics* in which the *transverse* oscillation of the sonotrode is used for working. This lambda sonotrode is concerned with the nodal point being in the work area with the radial deformation used to carry out the welding.

In contrast with Neuwirth et al, the claimed sonotrode is

used for metal welding where the movement of the sonotrode is along its *longitudinal axis* in the work area which is used for the welding. The reinforcement of the invention is intended to minimize deflections transverse to the longitudinal axis.

In Neuwirth et al, the diameter variation of the sonotrode in the work area is used for the welding as shown in Figures 21B and C and 22B and C, and it is especially obvious from Tables 3, 4 and 5, since horn gain is of particular interest. This in turn is made clear especially from Table 6 regarding "average radial amplitude."

In Neuwirth et al, the sections that project on the front side beyond the ring-shaped work area are not meant for reinforcement of the sonotrode. According to the embodiment shown in Figures 20 and 28, the sonotrode has a counterbore to enable amplitude transformation. Clearly, the sonotrode would be weakened in its front region due to the counterbore and one would not use a counterbore in a section to be reinforced.

Thus, the Neuwirth et al reference discloses a sonotrode which operates in a different manner and which is used for a different purpose, and which does not include any means for reinforcement.

Withdrawal of this rejection is requested.

In view of the foregoing amendments and remarks, Applicants submit that the present application is now in condition for allowance. An early allowance of the application with amended claims is earnestly solicited.

Respectfully submitted,



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